

Freeing industrial gases from hydrogen sulfide with  
recovery of elemental sulfur. M. V. Hoffman, S. G.  
Aroney and R. M. Mikkelson. *Ind. Eng. Chem. Anal. Ed.* (U. S.  
S. R.) 1953, No. 5-6, 40-45; cf. C. A. 26, 2873. A  
process for S recovery from gases by absorption of  $H_2S$  by  
an alk. soln. of  $As_2O_3$  is described. When  $H_2S$  is absorbed  
in a freshly prepd. alk. soln. of  $As_2O_3$ ,  $Na_2AsS_4$  and  
 $Na_2As_2S_5$  are formed. After blowing air through  
the soln., oxidation of  $As^{III}$  to  $As^V$  takes place with forma-  
tion of  $Na_2As_2S_5$ . James Sweet

The preparation of sulfur from carbon gas by a method analogous to the Thiele process on a commodity scale is described by M. V. Hidman, S. O. Aronov and H. M. Mikhailov, *Tr. Khim.-Fiz. (Moscow) 1936, No. 8, 17-21; cf. C. A. 27, 3481*.—Carbon gas is passed at the rate of 300 cu. m. per hr. through the app. described by H. and A. (C. A. 26, 2875). The liquid which absorbs the  $H_2S$  circulates at 261.5 per cu. m. of gas. It contains 6-7 g. per l. of  $As_2O_3$ . The ratio of  $NaOH$  to  $As_2O_3$  must not exceed 3:1 unless  $NH_4OH$  is present, in which case, a slightly higher ratio is permissible. In the regenerator 30 cu. m. of air per hr. is sufficient. The whole process is run at 40°. Removal of HCl from the gas is 10-75%; recovery of S from the soln. is 90-100%.  
H. M. Lancaster

M. M. Langerstein

ASD-3LA METALLURGICAL LITERATURE CLASSIFICATION

ca 21

Coating the gas case in coke oven. M. V. Hoffmann and D. S. Dorofeyev. *Coke and Chem. (U.S.S.R.)*, No. 12, 21-7(1935); *Chemie & Industrie* 26, 913-14. Coating with H<sub>2</sub>O and steam is preferable to the use of H<sub>2</sub>O alone. A. Papiernu-Cruty

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

*PD*

PROCESSES AND PROPERTIES INDEX

*K<sub>s</sub>*

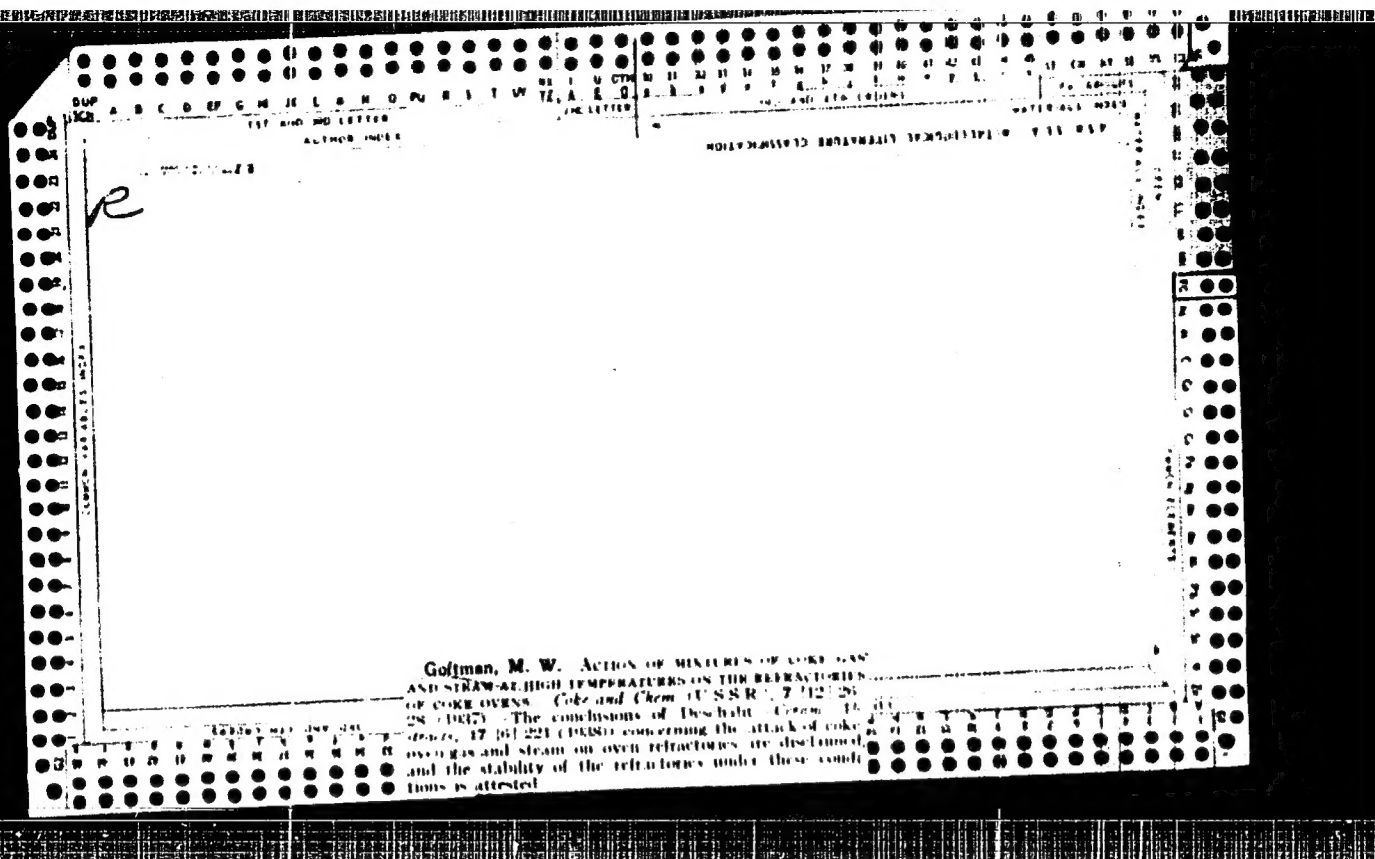
**Elimination of hydrogen sulfide from industrial gases,  
with recovery of elementary sulfur.** IV. M. V. Medv.  
man, S. G. Aronov, S. R. Senichenko and N. B. Khvt.  
Coke and Chem. (U. S. S. R.) 1950, No. 2-3, 91-100; cf.  
C. A. 29, 3140<sup>a</sup>. —98.5-99% of the H<sub>2</sub>S in coke-oven gas  
can be eliminated by scrubbing with aq. (NH<sub>4</sub>)<sub>2</sub>AsO<sub>4</sub> and  
98.5% of the absorbed H<sub>2</sub>S is recovered as S. B. C. A.

AS - SLA METALLURGICAL LITERATURE CLASSIFICATION

SECOND - MAP ONE JOB

ALSO IN

LIST AND (INC. ORDER)		PROCESSES AND PROPERTIES: 1111	
<p>ca</p> <p>The problem of the production of sulfur and sulfuric acid in the coking of coal. M. V. Medvedev. <i>Coal and Chem.</i> (U. S. S. R. J. V. No. 4-5, 19-22(1967)); <i>Chem. Zvest.</i> 1968, 12, 2163. — Suggestions are offered for the control of the pyrites from Donets coal and methods of producing <math>H_2SO_4</math> directly from the <math>H_2S</math>-contg. gases discussed.</p> <p>M. G. Moser</p>		21	
<p>ADD. 51A METALLURGICAL LITERATURE CLASSIFICATION</p>			



127 AND 128 INDEX

PER-FILES AND PROPERTIES INDEX

127

Influence of pyrites on the final sulfur content of coke  
 M. V. Hofman, I. A. Kopelevich and Kh. M. Musayeva  
 (U. S. S. R.) 1937, No. 8, 10-13.  
 Decompos. of  $FeS_2$  to  $FeS$  commences at 700° and is practically complete at 800°. In presence of C the reaction begins at a lower temp., but residual S is greater, probably owing to adsorption of S by C. Under conditions of coking, loss of S amts. to 30% and of sulfide-S to 20%  
 B. C. P. A.

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ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION

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**Evaluation of various methods for the production of sulfuric acid from coke-gas hydrogen sulfide.** M. V. Hoffman and M. S. Litvinenko. *Coke and Chem. A. S. S. R.* 1939, No. 3, 30-42; *Khim. Referat. Zhur.* 1939, No. 7, 73-84; cf. C. A. 33, 8508<sup>7</sup>. For the recovery of  $H_2S$  from coke-oven gas, the following methods were investigated: "Pu," "Sobord," phenolate, absorption with caustic soda,  $NH_3$  absorption and phosphate. None of these methods is recommended for use in the industry. W. R. Henn

W. R. Hanna

ASD-5A METALLURGICAL LITERATURE CLASSIFICATION

1570-1571



21

*Ca*

The prospect of utilizing coal pyrite. M. V. Hofman and G. P. Vondt. *Coke and Chem.* (U. S. S. R.) 11, No. 3, 6-10(1941); *Chem. Zvest.* 1943, 1, 1032.—The possibilities of using coal pyrite in the H<sub>2</sub>S<sub>2</sub> plants in the south of the U. S. S. R. are discussed. At present only coal pyrite sorted by hand is used in the H<sub>2</sub>S<sub>2</sub> plants. It is reasoned in mine, with pyrites from the Ural. By using sorting equipment still larger amts. of pyrite concentrate can be obtained from the gang of the coal of the Donets region. This can be used in mine, with pyrites from the Ural for the production of H<sub>2</sub>S<sub>2</sub>.

M. G. Moser

ASB-56A METALLURGICAL LITERATURE CLASSIFICATION

FROM DIVISION										FROM DIVISION																			
SUBJECT - KEY ONLY USE										SUBJECT - KEY ONLY USE																			
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Gottman, M. U.

Mixture of phthalic and maleic anhydrides. M. U. Gottman and A. I. Golub. U.S.S.R. 100,037, Sept. 20, 1966. The mixt. is obtained by contact vapor-phase oxidation of fluorene with air. As catalyst is used fused  $\text{V}_2\text{O}_5$  which insures a yield of phthalic anhydride up to 80%.

M. Hogg

5 C  
1-4E3c  
1-4E4J  
D

VODNEV, G.G.; SHELKOV, A.K.; DIDENKO, V.Ye.; FILIPPOV, B.S.; TSAREV, M.H.;  
 ZASHVARA, V.G.; LITVINENKO, M.S.; MEDVEDEV, K.P.; MOLODTSOV, I.G.;  
 LGALOV, K.I.; RUBIN, P.G.; SAPOZHNIKOV, L.M.; TYUTYUNNIKOV, G.N.;  
 DMITRIYEV, M.M.; LEYTES, V.A.; LERNER, B.Z.; MEDVEDEV, S.M.; REVYAKIN,  
 A.A.; TAYCHER, M.M.; TSOGLIN, M.E.; DVORIN, S.S.; RAK, A.I.; OBUKHOV,  
 SKII, Ya.M.; KOTKIN, A.M.; ARONOV, S.G.; VOLOSHIN, A.I.; VIROZUS, Ye.V.;  
 SHVARTS, S.A.; GINSBURG, Ya.Ye.; KOLYANDR, L.Ya.; BELETSKAYA, A.F.;  
 KUSHNEREVICH, N.R.; BRODOVICH, A.I.; NOSALEVICH, I.M.; SHTROMBERG, B.I.;  
 MIROSHNICHENKO, A.M.; KOPELIOVICH, V.M.; TOPORKOV, V.Ya.; AFONIN, K.B.;  
 GOTTMAN, M.V.; SEMENENKO, D.P.; IVANOV, Ye.B.; PZYSAKHZCN, I.B.;  
 KUPAKOV, N.K.; IZRAELIT, E.M.; KVASHA, A.S.; KAPTAN, S.I.; CHERDONYKH,  
 M.S.; SHAPIRO, A.I.; KHALABUZAR', G.S.; SEKT, P.Ye.; GABAY, L.I.;  
 SMUL'SON, A.S.

Boris Iosifovich Kustov; obituary. Koks i khim. no.2:64 '55.(MLBA 9:3)  
 (Kustov, Boris Iosifovich, 1910-1955)

GOFMAN, M. V.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of  
Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62536

Author: Gofman, M. V., Golub', A. I.

Institution: None

Title: Catalytic Oxidation of Phenanthrene and of Anthracene Fractions.  
Communication 1.

Original

Periodical: Zh. prikl. khimii, 1955, 28, No 5, 507-515

Abstract: Phenanthrene (I) and anthracene fractions were oxidized for the purpose of producing phthalic anhydride (II). The catalyst was fused vanadium pentoxide. Optimal operating conditions were determined by vapor phase oxidation of pure naphthalene. At 460°, contact time ~2 seconds and ratio of air to vaporized substance ~15 l/g yield of acidic products recomputed as II was 91% or 79% of theory. On oxidation of pure I optimal temperature 448-449°, air to I ratio (l/g) 20:1, contact time 4-6 seconds. Yield of

Card 1/2

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62536

Abstract: acidic products recomputed as II, 69.8-71.9%. Acidic products consist on the average of 86% II and 14% maleic anhydride (III). On oxidation of redistilled, washed anthracene fraction, boiling range 310-345°, yield of acidic products on the basis of I is 112.22% of which 78.90% is II and the remainder III. In addition there are obtained 62.7% anthraquinone on the basis of theoretically calculated amount of anthracene present in the fraction. By boiling with 5% alkali and sublimation an anthraquinone MP 286° is obtained which does not depress the melting point of pure synthetic anthraquinone and has identical other characteristics with the latter. Yield of acidic products on catalytic oxidation of unwashed first anthracene fraction is 287.51% of the theoretically calculated on the basis of the phenanthrene; 188.14% of these are II and the remainder III. In addition there is obtained a 42.54% yield of anthraquinone on the basis of the anthracene. Large yield of acidic products on oxidation of anthracene fractions, exceeding greatly their yield from pure I confirms the proposition concerning the advantages of composite utilization of a number of compounds in mixtures for the purpose of obtaining the same product.

Card 2/2

GORTMAN, M. V.

Distr: 4E4j/AE20(1)

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✓ Mixture of phthalic and maleic anhydrides with 8,8-chrysenoquinone from chrysene and a mixture of 3,10- and 3,6-pyrenequinone from pyrene. M. V. Gortman and A. I. Golub. U.S.S.R. 102,704, May 25, 1960. Chrysene or pyrene or the corresponding fractions of coal tar are catalytically air-oxidized in the vapor state with fused  $V_2O_5$  catalyst at 400° at an air to vapor ratio of 20-40 g./l. and contact time 1.5-4.5 sec. M. Huzar

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2 May

GOFTMAN, M.V., doktor tekhnicheskikh nauk; GOLUB, A.I., kandidat tekhnicheskikh nauk.

Vapor-phase catalytic oxidation of coal-tar products. Koks i khim.  
no.2:51-55 '56. (MLRA 9:7)

1.Ural'skiy politekhnicheskii institut (for Gofman).2.Vostechnyy  
uglekhimicheskii institut (for Golub).  
(Coal-Tar products) (Oxidation)

GOTTMAN, M.V.; KHARLAMPOVICH, G.D.

Chemical utilization of coal tar. Koks i khim.no.8:47-50 '56.  
(MLRA 10:1)

1. Ural'skiy politekhicheskiy institut imeni S.M. Kirova.  
(Coal tar)



GOFMAN, M.V., doktor tekhnicheskikh nauk; BUTORIN, V.I., kandidat  
tekhnicheskikh nauk.

Letter to the editor. Lit.proisv. no.9:32 S '56. (MLRA 9:11)  
(Goke)

GOLTMAN, M.V.

Improving the Quality of Foundry Coke. M. V. Goltman and V. A. Kuznetsov. (Leningrad: *Proletarian*, 1954. 111 p. [In Russian].) After indicating the importance of foundry coke of good quality and the frequent failure of Soviet foundries to obtain this, the authors describe experiments with laboratory and semi-work scale equipment in which the effects of changes in coking charge composition on coke quality were studied. Good cokes were obtained when anthracite was added to the coking charge, especially when coking speed was increased. With anthracite contents of 25% the pitch requirements (10%) became excessive; pre-compression of the charge, heated to the pitch softening temperature enabled pitch content to be kept down to, say, 7-10% with an anthracite content of 70-80%. — *Engineering*

Gottman, M. U.

Improvement of cupola coke. V. I. Babin and M. V. Gottman. Trudy Ursk. Pribor. Inst. in S. M. Kirov 1955. No. 53, 74-81. Addn. of 10% asphaltite to the coke-oven charge produced coke which was coarser, more uniform in size, less porous, and less reactive. Test runs with this coke in a cupola showed decreased coke gasification, higher metal temps., and lower CO:CO<sub>2</sub> ratios.

E. W. Rademacher

GOFMAN, M.V.; GOLUB, A.I.

Catalytic oxidation of basic polycyclic compounds of coal tar and  
some of its fractions. Zhur.prikl.khim. 29 no.8:1256-1265 Ag '56.  
(MIRA 10:10)

1.Vostochnyy nauchno-issledovatel'skiy uglekhimicheskiy institut.  
(Oxidation) (Coal tar) (Phthalic anhydride)

GOTTMAN, M. V.

Catalytic oxidation of polynuclear aromatic compounds and fractions of coal tar. III. Mechanism of vapor phase catalytic oxidation of phenanthrene. M. V. Gottman and A. I. Golub. *Zhur. Priklad. Khim.* 29, 1745-51 (1956); cf. *C. & E.* 50, 3362g. --Examination of the products of vapor phase oxidation of phenanthrene showed that the overall reaction is much more complex than previously assumed (cf. Bal'and and Lazarev, *C.A.* 31, 4313<sup>g</sup>; Choudhury and Baber, *C.A.* 32, 2524<sup>g</sup>) and involves many intermediates. 9,10-Phenanthrenequinone-NaHSO<sub>3</sub> yields the diketone on treatment with 30% H<sub>2</sub>SO<sub>4</sub> directly, but treatment with 30% NaOH yields a green product, which develops the normal diketone color only after diln. or standing. If the product of vapor phase oxidation of phenanthrene is treated with hot AgOH and the soln. treated with NaHSO<sub>3</sub>, the resulting ppt. is also green and chromatographic treatment of the substance on paper in C<sub>6</sub>H<sub>6</sub> shows a yellow-green substance which fluoresces yellow in the ultraviolet; this shows polarographic *E*<sub>0.1</sub> -1.24 v. (weak) and -1.00 v. (strong). The substance appears to be an HO deriv. and contains 3.61% HO groups, 50% of calcd. amt. for mono-OH deriv. of phenanthrenequinone.

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AUTHOR: Gofman, M.V., Raukas, M.M. and Kharlampovich, G.D. 530  
(Urals Polytechnical Institute of S.M. Kirov).  
TITLE: Methods of improvement of the technology of production of  
naphthalene. (Puti uluchsheniya tekhnologii proizvodstva  
naftalina.)  
PERIODICAL: "Koks i Khimiya" (Coke and Chemistry),  
1957, No. 4, pp. 45 - 47, (U.S.S.R.)

ABSTRACT: A short review of methods of production of naphthalene is given. It is concluded that the most expedient method of producing naphthalene is: preliminary distillation in order to prepare a wide fraction, its washing and exact rectification on a powerful continuous column. The limits of wide fraction can be varied but 170-300 ° or 170-280 °C is recommended. In order to provide an additional amount of heat to the naphthalene column necessary for the evaporation of reflux, re-circulation of a part of the bottom product of this column through a pipe pre-heater is proposed. The proposed scheme is shown in the diagram. It is stated that in future two grades of naphthalene will be produced: crystalline naphthalene (Eastern coke oven works) and 80-90 fraction (Southern coke oven works). The latter fraction can be used for oxidation for the production of phthalic anhydride. There is 1 table, 1 diagram and 7 Russian references.

Gottman, M V

Raw materials for organic synthesis from coal tar. M. V. Gottman and A. I. Golub. *Zhur. Priklad. Khim.* 30, 1264-1265 (1987); cf. preceding abstr. A reply to Pats (see, ref.). Oxidation of the anthracene fraction gave not only phthalic anhydride but also anthraquinone and maleic anhydride - the sources for which are expensive. I. Beskovits

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4E4  
4E568

Goffman, M. C.

The mechanism of inhibition by heterocyclic nitrogen bases in the pickling of steel with sulfuric acid in the presence of certain anions. M. D. Ruzhanskaya and M. V. Goffman. *Dokl. Akad. Nauk SSSR*, 1984, 271, 1181-1183. The addition of  $\text{SCN}^-$ ,  $\text{I}^-$ , and  $\text{Br}^-$  increases the inhibition action ( $\gamma$ ) of quinoline retarding the soly. of Fe in 12%  $\text{H}_2\text{SO}_4$  at 70-80°. The effect of  $\text{CN}^-$ ,  $\text{Cl}^-$ ,  $\text{F}^-(\text{CN})_4^-$ , and  $\text{Fe}(\text{CN})_6^{4-}$  is negligible. Synthesized complexes  $\text{Fe}(\text{SCN})_3$ ,  $(\text{C}_6\text{H}_5)_3\text{N} \cdot \text{SCN}$ , and  $\text{C}_6\text{H}_5\text{N}$  affect  $\gamma$  to the same degree as equiv. mixes. of  $\text{C}_6\text{H}_5\text{N}$  and the corresponding anions. The max. effect is obtained when the proportion of anions added is sufficient to form the complex:  $\gamma = \rho/\rho_0$  where  $\rho$  is the loss in wt. of Fe g./sq. cm. hr. and  $\rho_0 = 46 \times 10^{-4}$  g./sq. cm. hr. *Chem. Abstr.*

Distr: 4E2c/4E4j/4E4d



GOFTMAN, M.V.; KHARLAMPOVICH, G.D.

New technological arrangement for the processing of tar. Trudy  
Ural. politekh. inst. no. 59:5-13 '57. (MIRA 11:4)  
(Tar) (Distillation)

GOFTMAN, M.Y.; KHARLAMPOVICH, G.D.

Studying higher phenols from coal tar, Trudy Ural. politekh. inst.  
no. 59:14-36 '57. (MIRA 11:4)

(Tar acids--Analysis)

GOTTMAN, M.V.; KHARLAMPOVICH, G.D.

Separating pure  $\alpha$ -naphthol,  $\beta$ -naphthol, p-phenylphenol and  
durenol out of phenols from coal tar. Trudy Ural. politekh. inst.  
no. 59:37-46 '57. (MIRA 11:4)

(Tar acids)

GOTTMAN, M.V.; YEMEL'YANOVA, V.P.

Complete refining of crude anthracene, Trudy Ural, politekh. inst.  
no. 59:47-67 '57. (MIRA 11:4)

(Anthracene)

GOFMAN, M.V.; LEVIN, I.S.; BARNYAKOVA, T.A.

Producing ultrapure coal as a substitute for pitch in the manufacture of low ash content coke. Trudy Ural. politekh. inst.  
no. 59:67-73 '57. (MIRA 11:4)

(Coal preparation)

GOFMAN, M.V.

I-i

USSR/Chemical Technology - Chemical Products and Their  
Application. Industrial Organic Synthesis

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2157

Author : Gofman, M.V., Kharlampovich, G.D.

Inst :  
Title : Study of Antioxidant Properties of Higher Phenols.

Orig Pub : Zh. prikl. khimii, 1957, 30, No 3, 439-446

Abstract : A study was made of the antioxidant action of higher phenols. Alpha-naphthol (I) and beta-naphthol (II) were used as comparison standards. Paraffin was subjected to oxidation. The objects of study were: phenol, o-cresol, phenol-cresol fraction, xylene fraction, polyalkylphenol fraction, I, II, waste products of the recovery of I or II, methyl naphthols, dimethyl naphthols, p-phenyl phenol, methyl phenyl phenols, heavy phenols (boiling above 330°) in an amount of 0.05-0.1%. The content of peroxides was determined. The study was based upon the well-known

Card 1/3

Application. Industrial Organic Synthesis

Abs Jour

Ref Zhur - Khimiya, No 1, 1958, 2157

CIA-RDP86-00513R000615530001-0"

paper.

A diagram and description of the unit for the oxidation of paraffin, are included.

Card 3/3

GOFMAN, M.V.

AUTHORS: Gofman, M.V., and Kharlampovich, G.D.

68-1-15/22

RUS'YANOVA, N.D.; GOFTMAN, M.V.; BURNISTRENKO, L.A.

Nitrogen-base coal resins as inhibitors of steel corrosion in  
acids. Zhur. prikl. khim. v. 31 no.5:748-754 My '58. (MIRA 11:6)  
(Gums and resins) (Steel--Corrosion)

5(3)

AUTHORS: Rus'yanova, N. D., Gofman, M. V.

SOT/156-59-2-40/48

TITLE: The Extraction of High-Percentage Chinoline, Isochinoline and Acridine From the Bases of Coal-Tar (Polucheniye vysokoprotsentnykh khinolina, izokhinolina i akridina iz osnoveniy kamennougol'noy smoly)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 2, pp 376-379 (USSR)

ABSTRACT: Table 1 shows the boiling-points of the initial material, the basic coal-tar fraction with a specific weight of 1.1023. The computation of a rectifying column working at atmospheric pressure showed that a separation of chinoline and isochinoline is practically impossible under these circumstances. On the other hand, an experimental installation working at a vacuum of 60 mm Hg, produced chinoline with a purity of 94-95%, isochinoline with a purity of 56% and acridine with a purity of 38.5%. The pure preparation of the chinolines was obtained by an azeotrope rectification with diethyleneglycol (Table 2). Chinaldine was eliminated as chinophthalone by phthalic anhydride.

Card 1/2



The Extraction of High-Percentage Chinoline,  
Isochinoline and Acridine From the Bases of Coal-Tar

SOV/156-59-2-40/48

Pure acridine was produced by crystallization in gasoline.  
There are 3 figures, 2 tables, and 6 references, 4 of which  
are Soviet.

PRESENTED BY: Kafedra khimicheskoy tekhnologii topliva Ural'skogo  
politekhnikeskogo instituta im. S. M. Kirova  
(Chair for Chemical Technology of Fuels Ural Polytechnic  
Institute imeni S. M. Kirov)

SUBMITTED: July 7, 1958

Card 2/2

GOLDMAN, J.

18(5) PART I BOOK EXPLOITATION 507/2048

Sverdlovsk. Ural'skiy politkhimicheskiy institut imeni S.M. Kirova  
Teoriya i praktika lit'yego proizvodstva (Theory and Practice in the  
Foundry Industry) Moscow, Mashiz, 1959. 231 p. and 32 p.  
(Series: Ita; [Sbornik] vyp. 89) Errata slip inserted. 5,000  
copies printed.

Ed.: A.A. Gershteyn, Corresponding Member, USSR Academy of Sciences,  
Doctor of Technical Sciences, Professor; Tech. Ed.: N.A. Dugina;  
Assoc. Ed.: (Ural-Siberian Division, Mashiz); A.V. Molotkin,  
Engineer.

PURPOSE: This book is intended for engineering and scientific workers  
of institutes and machine-building plants, as well as for students  
of advanced courses at vuzes.

COVERAGE: This collection consists of articles dealing with practical  
problems in foundry processes. The articles review the achieve-  
ments of Ural foundry workers in the past 40 years and present  
aspects of a current study on the casting of nodular cast iron,  
its properties and casting methods. A description is given of  
artificial and architectural casting. Consideration is given to the  
problem of emitting gases in steel and aluminum. The structure  
of casting technology is discussed. A recent investigation of vacuum  
casting including its characteristic properties and new applications  
is also presented. There are 32 pages of photographs illustrations  
at the end of the book. 40 perennities are mentioned. References  
follow each article.

TABLE OF CONTENTS:

PART 2. IRON CASTING

Serikova, N.V. [Doctor of Technical Sciences], and E.G. Medvedev.  
[Unpublished]. Production of a Special Gaseous Mixture for Cupola 46  
Purposes

The author discusses the disadvantages and economic losses re-  
sulting from the use of blast-furnace and other low-quality  
slag in cupola blast. The goal of the investigation involved  
is to develop a new method of producing improved cupola coke  
with a porosity not higher than 20 to 25 percent, a low re-  
action ability, and a given uniform mesh size. Laboratory in-  
vestigations, the author confirms the possibility of producing  
such coke from available materials.

Gershteyn, A.A., and Yu.F. Zerkhinov. Cupola slag 60  
The authors describe the composition of cupola slag in con-  
trolling the chemical composition of the iron, preventing de-  
struction of the iron with gases from the furnace atmosphere dis-  
solving non-metallic inclusions, and controlling lining life.

They give the optimum composition of slag required for a furnace  
with fire clay lining in order to insure proper operation of  
the cupola and to produce a high-quality iron.

TSIPEROVICH, Moisey Veniaminovich; GOFMAN, M.V., red.; TSYMBALIST,  
N.N., red.izd-va; ZEP, Ye.M., tekhn.red.; MATLYUK, R.M.,  
tekhn.red.

[Coal preparation in heavy media; fundamentals of theory and  
practice] Obogashchenie uglei v tiazholykh sredakh; osnovy  
teorii i praktika. Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry  
po chernoi i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1959.  
422 p. (MIRA 13:1)

(Coal preparation)

AUTHOR: Gelfman, M.V.

SOV/68-59-1-2C/26

TITLE: At the Chair of Chemical Technology of Fuels of the  
Urals Polytechnical Institute (Na kafedre khimicheskoy  
tekhnologii topliva Ural'skogo politekhnicheskogo instituta)

PERIODICAL: Koks i Khimiya, 1959, Nr 1, p 61 (USSR)

ABSTRACT: 1) A new technology of processing phenols which will  
increase the yield of light phenols by 5-10% and improve  
the quality of some high boiling phenols was developed. A  
project of reconstruction of the phenol plant on the  
Nizhniy Tagil Works "Plastmass" according to the new scheme  
is being prepared. 2) A method of separate recovery of  
ammonia and pyridine bases was developed and is being tested  
on the Chelyabinskiy metallurgicheskiy zavod (Chelyabinsk  
Metallurgical Works). 3) The work on the development of  
a new method of ammonia recovery by absorption with acid  
salts is being continued. In 1959, pilot plant experiments  
will be organized on the Nizhniy Tagil Works.  
4) Catalytic oxidation of phenanthrene-anthracene fractions  
is being studied. 5) A method of producing high-quality  
coke from blends containing anthracite was developed. The  
method was introduced at the Leningrad/CPS Works.  
Card1/2 Possibilities of further increase in the proportion of

At the Chair of Chemical Technology of Fuels of the Urals  
Polytechnical Institute

SOV/68-59-1-20/26

anthracite by its physical and chemical treatment are being studied. 6) A method of production of high-quality foundry-briquetted coke containing 80-85% of anthracite was developed. Works for the production of such briquettes to be erected in the Sverdlovsk economic region are being designed. 7) Evaluation of various types of brown coals as a chemical raw material is being investigated. Work on the production of metallurgical fuel from brown coals of the Kustanay district has been started.

Card 2/2

5(3)

SOV/80-32-4-36/47

AUTHORS: Kharlamovich, G.D., Gofman, M.V., Raukas, M.M. and Rus'yancva, N.D.

TITLE: Antiseptic Properties of the Components of Coal Tar (Antisepticheskiye svoystva komponentov kamennougol'noy smoly)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 905-909 (USSR)

ABSTRACT: The antiseptic action of individual components of the coal-tar oil have not been sufficiently studied thus far. Therefore the authors undertook an investigation of the action of various coal-tar oils and their individual components, separated from these oils, on wood-destructive fungi of the Coniophora cerebella and Merulius domesticus species. The results of the experiments are shown in tables and in graphs where figures of the loss of weight, ascribed to the destructive action of the fungi, are given. Conclusions drawn by the authors are as follows:

1. Phenols are more effective antiseptics than bases and neutral compounds, the effectiveness of the latter two is approximately the same;
2. The alkylation raises the antiseptic activity of phenols;
3. Naphthols and their homologs are better antiseptics than phenol derivatives;
4. The activity of compounds with a condensed system of benzene rings is higher than that of compounds with disconnected benzene rings;
5. Compounds

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Antiseptic Properties of the Components of Coal Tar

SOV/80-32-4-36/47

containing the imino-group are a nutritive medium for the fungi, accelerating their growth. Moreover, it was established that a definite maximum of activity exists for all the groups of coal tar components, and the values of the temperatures of these peaks are given. It was also found out that toxicity of impregnating oils did not drop when phenols were removed from them, provided that the phenol content was less than 10%; however, with increasing content of phenols above 10% the toxicity of coal-tar oils increases. Therefore, coal-tar oils with phenol content higher than 10% are especially effective antiseptics. There are 3 graphs, 2 tables and 3 references, 1 of which is Soviet and 2 American.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S.M.Kirova (Ural Polytechnical Institute imeni S.M.Kirov)

SUBMITTED: October 4, 1957

Card 2/2

PHASE I BOOK EXPLOITATION SOV/4350

Soveshchaniye po khimii, tekhnologii i primeneniyu proizvodnykh piridina i khinolina. Riga, 1957

Khimiya, tekhnologiya i primeneniye proizvodnykh piridina i khinolina; materialy soveshchaniya (Chemistry, Technology and Utilization of Pyridine and Quinoline Derivatives; Materials of the Conference) Riga, Izd-vo AN Latviyskoy SSR, 1960. 299 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agencies: Akademiya nauk Latviyskoy SSR. Institut khimii; Vsesoyuznoye khimicheskoye obshchestvo.

Ed.: S. Bazhanova; Tech. Ed.: A. Klyavinya; Editorial Board: Yu. A. Bankovskiy, Candidate of Chemistry, E. V. Vanaga, Candidate of Chemistry (Resp. Ed.), L. P. Zalukayev, Doctor of Chemistry, and M. M. Kalnyn'.

PURPOSE: This book is intended for organic chemists and chemical engineers.

Card 1/10



Chemistry, Technology (Cont.)

SOV/4350

COVERAGE: The collection contains 33 articles on methods of synthesizing or producing pyridine, quinoline, and their derivatives from natural sources. No personalities are mentioned. Figures, tables, and references accompany the articles.

TABLE OF CONTENTS:

I. PYRIDINE AND QUINOLINE DERIVATIVES OBTAINED FROM  
THE THERMAL CRACKING PRODUCTS OF FUELS

Rus'yanova, N. D., and M. V. Gofman [Ural'skiy politekh-  
nicheskiy institut (Ural Polytechnic Institut)] .Methods of  
Extraction and Ways of Utilizing Coal-Tar Bases 5

Ivashchenko, Ya. N. [Vostochnyy nauchno-issledovatel'skiy  
uglekhimicheskiy institut (Eastern Scientific Research  
Institute for Coal Chemistry)]. The Present State and Pros-  
pects for the Production and Utilization of Hard Coal  
Pyridine Bases 13

~~Card 2/10~~

60 F1 1000/1000

PLATE I BOOK EVALUATION NOV/1999

Ленинград. Политехнический институт  
 Советские достижения в области порошковых, литьевых и сварочных технологий (Recent achievements in powder, casting and welding technologies) (Scientific and technical achievements of the Soviet Union in the field of powder metallurgy, casting and welding). Moscow: Mashin. 1970. 385 p. Approx. 4,000 copies printed.

Бесп. Ed.: Yu. A. Medvedev, Doctor of Technical Sciences, Professor, Ed.: M. O. Gulyaev, Doctor of Technical Sciences, Professor, and L. P. Lohov, Doctor of Technical Sciences, Professor. Ed. for literature on Mashin. Building (Engineering Department, Machine): Ye. P. Kuzov, Engineer, Tech. Ed.: Ye. A. Gulyaev, and L. V. Shchegoleva.

Примеч.: This book is intended for the technical personnel of enterprises. It may be used by students of the field.

Содерж.: This collection of articles discusses problems in casting processes. Individual articles treat the salting of metals and their alloys, mechanization and automation of casting processes, aspects of the manufacture of steel, cast iron, and nonferrous metal castings. No personalities are mentioned. References accompany individual articles.

Recent Achievements in Powdering (cont.) NOV/1999

18. Медведев, Ю. А. Investigation of New Types of Fuel 148 for Engines
  19. Горюхов, Н. В. and P. Ya. Medvedev. New Methods of Powdering 154
  20. Горюхов, Н. В. Utilization of the Steel and Cast Iron Chips in the Industry 159
  21. Кузнецов, В. Д. Temperature Regime of the Pouring (at Casting) of Turbulence Blades 165
  22. Мухомов, В. Я. Laboratory Methods of Measuring the Temperature of Molten Metals 169
- IV. PROBLEMS OF WELDING
23. Берг, Л. П. Dimensional Accuracy of Castings 178
  24. Оболонников, Л. Д. Generation of Adhesion Forces Between the Remelted Layer (Stick-up) and the Casting 183

KHARLAMPOVICH, G.D.; GOTTMAN, M.V.; HUS'YANOVA, N.D.

New method of recovering ammonia from coke-oven gas. Koks. i khim.  
no.4:34-39 '60. (MIRA 13:6)

1. Ural'skiy politekhnicheskiy institut.  
(Ammonia) (Coke-oven gas)

GOFTMAN, M.V., prof.; KHARLAMPOVICH, G.D.; RUS'YANOVA, N.D.

Ways of utilizing coke-gas ammonia. Zhur. VKHO 5 no.1:38-42 '60.  
(MIRA 14:4)

(Ammonia)

(Coke-oven gas)

GOFTMAN, M.V.; KHARLAMPOVICH, G.D.; RAUKAS, M.M.; RUS'YANOV, N.D.

Antiseptic properties of the products of coal tar. Trudy Ural.  
politekh. inst. no.94:90-102 '60. (MIRA 15:6)  
(Coal tar) (Antiseptics)

S/068/61/000/007/001/001  
E071/E435

AUTHORS: Rus'yanova, N.D., Goftman, M.V., Gordeyeva, Z.K.,  
Privalov, V.Ye., Zubok, A.M. and Khomutinkin, G.V.

TITLE: Production of High Percentage Phenanthrene

PERIODICAL: Koks i khimiya, 1961, No.7, pp.48-52


TEXT: It was recently established that phenanthrene can be used for the production of diphenic acid (a raw material for high quality plastics and resins) and 9-10 phenanthrene quinone (a valuable fungicide) but a technology for its production on coke-oven by-product plants was not available. The authors carried out an investigation in order to establish the most suitable starting raw material and operating equipment and practice for the production of phenanthrene fraction from which a high percentage (above 90%) phenanthrene can be obtained. As about 80% of phenanthrene in tar is concentrated in the anthracene oil, the latter was considered as the most suitable starting material. Calculations of the necessary column efficiencies for the separation of the pair phenanthrene-carbazole were carried out for a fraction containing 27% of phenanthrene and 2% carbazole (anthracene oil obtained from Card 1/6

Production of High ...

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the first anthracene fraction) and for a fraction containing 25% of phenanthrene and 11% of carbazole (a mixture of anthracene oil and the second anthracene fraction). The results indicated that the first type of raw material can be rectified on a column equivalent to 17 theoretical plates into an 80% phenanthrene fraction, while in order to obtain a similar product from the second type of raw material, a column equivalent to 50 theoretical plates would be necessary. Laboratory distillations of the above two raw materials as well as of the first anthracene fraction and raw anthracene were carried out on a column equivalent to 25 theoretical plates. The results of these laboratory distillations showed that the optimum raw material for the production of a concentrated phenanthrene fraction is anthracene oil. The laboratory results were checked on an industrial scale in the by-product plant of the Nizhne-Tagil Metallurgical Combine. A mixture of anthracene oil from the first and second anthracene fractions, containing 24% of phenanthrene, 11% of carbazole and 3% of anthracene was used for the experiments. The oil was washed with a 15% alkali and 25% acid. Rectification of the

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Production of High ...

washed oil (29.5 tons) was done on a column 1 m in diameter with 33 bubble cup trays. The collection of the fractions was done from a side outlet on the 27th plate. During the rectification two fractions were collected: first up to 320°C (a light fraction) and the second, phenanthrene fraction 320 to 345°C (25.5% of the charge). This contained 80% of phenanthrene, 8% of carbazole and 7.7% of anthracene. All together 84.97% of phenanthrene was recovered in the fraction. It is considered that a vacuum distillation would be more suitable. The required efficiency of the column for the separation of the pair phenanthrene-carbazole for a raw material containing 11% of carbazole under various pressures was calculated. On the basis of the above investigations, the following technological scheme for the production of phenanthrene fraction is proposed: anthracene oil washed from phenols and bases is heated in a pipe furnace to 280°C and passed into the first column equivalent to 18 to 20 theoretical plates. The light fraction is collected at the top, while the residue from the bottom is passed into a second column equivalent to 25 to 28 theoretical plates. The phenanthrene fraction is collected

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from the top of this column while a part of the residue from the bottom is utilized as a heat carrier, i.e. it is passed into the tube furnace, where it is again preheated and returned to the second column. Both columns operate under a vacuo at 100 mm Hg. The production of high percentage phenanthrene from the phenanthrene fraction was also tested. The fraction contains anthracene, carbazole and various oils (mainly a mixture of methyl homologues of fluorene, phenanthrene and anthracene). Phenanthrene used for further oxidation should be freed from carbazole and resinous substances. It was established that on treatment of phenanthrene fraction with 85% sulphuric acid at 35 to 50°C, phenanthrene is not sulphonated but a carbazole sulphate is obtained which, after separation of the acid layer, can be recovered by dilution of the latter with water (to an acid concentration of 50 to 55%). The treatment removes also resinous substances. This was as follows: the fraction was dissolved in xylene 1:2 or benzene 1:3 and treated with 85% sulphuric acid at 25 to 50°C. The consumption of acid depends on the concentration of carbazole. At a content of 2 to 3%, one

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washing with 5 vol.% of sulphuric acid for 15 minutes is sufficient. With a carbazole content of 8 to 10%, 2 to 3 washings, each time with fresh acid, are necessary. After the treatment with sulphuric acid the product usually contained not more than 0.2 to 0.3% of carbazole. After distilling off the solvent and a redistillation of the fraction to remove oils, it was pressed at 100 to 120 atm. A 90 to 92% product, melting at 91 to 93°C with an 80% yield was obtained. The main admixture was anthracene. Some laboratory tests (not described) indicated that the product is suitable for the production of diphenic acid. Under industrial conditions, a product melting at 92 to 94°C was obtained. After a single recrystallization from alcohol (1:5), phenanthrene melting at 99 to 100°C was obtained. There are 1 figure, 6 tables and 13 references: 8 Soviet-bloc and 5 non-Soviet-bloc. The work of L.D.Gluzman (Ref.6: Koks i khimiya, 1959, No.2) is mentioned. The references to English language publications read as follows:  
 R.E.Dean, E.N.White, D.McNeil, J.Appl.Chem., 1953, 3, 10, 469;  
 V.N.Kamat, J.de Sa, F.Fernandes, J.Sci.Ind.Res. 1956, 15, p.8;  
 U.S.Patent 2575314, C.A., 1952, 8152.

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Production of High ...

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ASSOCIATIONS: Ural'skiy politekhnicheskiy institut (Ural  
Polytechnical Institute) (Rus'yanova, N.D.,  
Goftman, M.V. and Gordeyeva, Z.K.);  
VUKhIN (Privalov, V.Ye.);  
Nizhne-Tagil'skiy metallurgicheskiy kombinat  
(Nizhne-Tagil Metallurgical Combine) ( Zubok, A.M.  
and Khomutinkin, G.V.)



Card 6/6

S/068/62/000/001/002/002  
E071/E435

AUTHORS: Rus'yanova, N.D., Kharlampovich, G.D.,  
Belyayeva, G.F., Gofman, M.V.

TITLE: Oxidation of anthracene-phenanthrene fraction with the  
production of anthraquinone, phthalic and maleic  
anhydrides

PERIODICAL: Koks i khimiya, no.1, 1962, 47-52

TEXT: The process of oxidation of the above fraction in the air-  
vapour phase over a vanadium-potassium-sulphate-silica gel  
catalyst (K-26) used in the industrial oxidation of naphthalene  
was investigated on a laboratory scale. The starting fraction  
was obtained by rectification of raw anthracene fraction with a  
column equivalent to 25 theoretical plates. The yield of the  
fraction was about 50% on raw anthracene. About 80% of  
anthracene and 75 to 80% of phenanthrene were concentrated in this  
fraction; mean composition: anthracene - 40 to 45%,  
phenanthrene - 35 to 40% and carbazole - 10 to 15%. The  
oxidation of pure anthracene and phenanthrene takes place under the  
following identical conditions: temperature 370°C, contact time  
2.3 to 2.4 seconds, load on the catalyst 25 to 30 g/litre hr.  
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Whereupon from anthracene, anthraquinone is obtained with a yield of 60% and from phenanthrene 54% of phthalic and 13.3% of maleic anhydrides. On shortening the contact time, the oxidation is incomplete and among the products of oxidation of phenanthrene lactone of 2-oxydiphenyl-2' carbonic acid is formed. The oxidation of anthracene-phenanthrene fraction at 370°C and contact time of 2.3 to 2.4 seconds leads to its complete combustion. Only on shortening the contact time to 2 sec was a yield obtained which was equal to that obtained from pure products at a contact time of 2.4 sec. However, there are substantial differences in the conditions of oxidation of phenanthrene:

- 1) the reaction products contained lactone, which on oxidation of pure phenanthrene appears only at a contact time of 1 sec;
  - 2) there was a decrease in the combustion of phenanthrene and the total yield of its oxidation products increased to 90% (72% acid products and 18% lactone). On shortening the contact time to 1.36 sec, a similar phenomenon was observed for anthracene; due to a decrease in the degree of complete combustion the yield of anthraquinone increases to 81%. On further shortening of the contact time to 1.06 sec, the yield of
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EO71/E435

Oxidation of anthracene- ...

anthraquinone increased to 84% but simultaneously the yield of anhydrides decreased. An increase in the load on the catalyst from 50 to 66 g/litre hr has a positive influence on the process. Optimum conditions at 370°C were: 1.36 sec contact time and 66 g/litre hr load on the catalyst. The composition of the mixture (proportion of anthracene to phenanthrene and the content of carbazole) also has a considerable influence on the process (Table 3). In the experiments the oxidation products - anthraquinone, lactone and a part of the phthalic anhydride (about 20%) - were caught in the air condenser, the remaining products in water. The separation of the reaction products presented no difficulties. Anthraquinone was purified by washing with hot water to remove phthalic anhydride, with a 20% alkali to remove lactone and then sublimated. The pure product had a melting temperature of 286 to 287°C. The aqueous solution of phthalic and maleic acids was evaporated in vacuo and anhydrides redistilled. These can be used as a mixture or separated on the basis of the difference in their solubility in water. It is considered that under industrial conditions, the condensation of the oxidation products should be done in two

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Oxidation of anthracene- ...

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stages; single-stage scrubbing would be difficult due to a high density of the product pulp (a high concentration of anthraquinone). The first stage scrubbing should be done in a Venturi scrubber with a water spray as the cooling medium. It is concluded that the oxidation of anthracene-phenanthrene fraction containing approximately equal proportions of anthracene and phenanthrene and a minimum amount of carbazole would be advantageous on an industrial scale. There are 5 figures, 5 tables and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to an English language publication reads as follows:  
Ref.1: Kinneu, C.R., Pinkus, I. Ind. Eng. Chem. 1951, 43, no.12, 2880.


ASSOCIATION: Ural'skiy politekhnicheskiy institut  
(Ural Polytechnical Institute)

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Oxidation of anthracene- ...

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Table 3.

1. raw material
  2. contact time, sec
  3. load on catalyst, g/litre hr
  4. Yield at the theoretical
  5. anthraquinone
  6. lactone
  7. phthalic anhydride
  8. maleic anhydride
  9. 55% anthracene, 35% phenanthrene and 10% carbazole
  10. 45% anthracene, 40% phenanthrene and 15% carbazole.
- 

Card 5/65



GOFTMAN, Mikhail Vladimirovich; ZINGER, S.L., red.izd-va;  
ISLENT'YEVA, P.G., tekhn. red.

[Applied chemistry of solid fuel] Prikladnaia khimiia tverdo-  
go topliva. Moskva, Metallurgizdat, 1963. 597 p.

(MIRA 16:7)

(Fuel) (Coal)

RUS'YANOVA, N.D.; GOFTMAN, M.V.; BELYAYEVA, G.F.

Recovery of concentrated phenanthrene from the phenanthrene fraction. Koks i khim. no.8:40-42 '63. (MIRA 16:9)

1. Vostochnyy uglekhiyicheskiy institut (for Rus'yanova).
  2. Ural'skiy politekhnicheskiy institut im. Kirova (for Gofman, Belyayeva).
- (Phenanthrene) (Coke industry--By-products)

GOFTMAN, M.V.; NEFEDOV, P.Ia.

Briquetted coke fuel for cupola furnaces. Koks i khim. no.3:  
31-34 '64. (MIRA 17:4)

1. Ural'skiy politekhnicheskii institut (for Gofman).
2. Vostochnyy uglekhimicheskii institut (for Nefedov).

LEVIN, I.S.; PELIK, T.M.; GOETMAN, N.Z.

New types of binders for briquetting derived from petroleum. Ugol'  
40 no.6:66-69 Je '65. (MIRA 18:7)

1. Ural'skiy politekhnicheskiy institut.

... ..

Stimulant of various central nervous system actions and also  
expansion of constriction of the brain. (Tech. 44, 644, 1972)  
no. 1118-70 p. 155. (1972)

CA GOFUNG, G.

17

Drying process at low temperatures R. Kauh Hish-  
vill and V. Chubong Myanmar Ind. S.S.S.R. II, No 11,  
73 (1980) M. M. Piskur .

1961

GOFUNG, I. I.

USSR / Pharmacology, Toxicology. Narcotics and Hypnotics.

U-2

Abstr Jour : Ref. Zh.-Biol., No 2, 1958, No 7926

Author : Gofung, I. I., Tsatskis, B.Z.

Inst :

Title : Proprioceptive Effects of Ethyl Alcohol

Orig Pub : Kurskiy Med. in-t, 1956, Vyp. 3, 22-27

Abstract : Experiments were performed on frogs. The muscle surface of the left thigh and the gastrocnemius muscles of both legs were exposed to a 5 -96° concentration of ethyl alcohol on a 5 X 5 cm filter paper for 30 seconds. It was established that a 5 -96° concentration of ethyl alcohol, acting on muscle receptors, caused a cardioinhibitory reflex. Ligation of the blood vessels of the extremity had no effect, although by tying the sciatic nerve above the site of the

Card : 1/2

Card : 2/2

GOTUNG, V.Ye., kand.med.nauk

Condition of the teeth and mouth in children with Down's disease.  
Stomatologiya 38 no.5:16-17 8-0 '59. (MIRA 13:3)

1. Iz detskoy polikliniki No.1 Kiyevskogo rayona Moskv (glavnyy  
vrach M.A. Rogachevskaya).  
(MENTAL DEFICIENCY) (MOUTH)



G03, H.

For multiple use of combines; harvesting small grains with harvesting-threshing machines, p. 12, ALLAMI GAZDASAG (Allami Gazdasagok Miniszteriuma es a Mezogazdasagi es Erdeszeti Dolgozok Szakszervelete) Budapest, Vol. 8, No. 6, June 1956

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 5, No. 11, November 1956

GOGA, Emilian, ing.

Cast iron used in the charge, and its influence on the hardness  
of rolling-mill cylinders. Metalurgia constr mas 13 no.12:1023-  
1027 W '61.

GOGA, Emilian, ing.

Device for mechanical centering of the ladle for casting  
steel in ingots. Metalurgia constr mas 14 no.8:755-756  
Ag '62.

1. Uzina "Otelul Rosu".

GOGA, Emiliano, ing.

Manufacture of semicalmed steel. Metalurgia si constr mas  
15 no.3:215-217 Mr '63.

GOGA, F.

Ways of improving certain planned indexes in the exploitation of rolling stock. p. 571.

REVISTA CAILOR FERATE. (Cailor Ferate Romine) Bucuresti, Rumania.  
Vol. 6, no. 11, Nov. 1958.

Monthly List of East European Accessions (EEAI) IC, Vol. 8, no. 7, July 1959

Uncl.

GOGA, Florian I., ing.

Influence of the state of the curves on the circulation of railroad vehicles. Rev cailor fer 11 no.1:18-22 Ja '63.

1. Directia regionala Cailie Ferate Romine, Timisoara.

GOGA, Florian I., ing.

Practical method for determination of the opening out of  
the line on railroad curves. Rev cailler for 11 no. 11:632-  
637 N°63.

1. Sectia L3, Timisoara.

GOGA, Florian I., ing.

Effect of supplementary strain produced in rails by dislevelments.  
Rev callor fer l3 no.3:149-157 Mr 65.

1. Section L3, Timisoara.



VEDYAPIN, M.G.; GOGA, I.V.; SHALDAISOV, A.P.

Wider use of winches for roof caving. Ugol' 35 no.2:19-23  
F '60. (MIRA 13:5)

1. Kiselevskiy mashinostroitel'nyy zavod Kemerovskogo  
sovnarkhosa.  
(Winches) (Mining engineering)

VEDYAPIN, M.G.; GOCA, I.V.; SHALDAISOV, A.P.

Industrial testing of the LMK-20 shunting winch. Ugol' 39 no.1:  
50-51 Ja '64. (MIRA 17:3)

1. Kiselevskiy mashinostroitel'nyy zavod.

L 54486-65

RU/0017/64/000/010/0421/0433

ACCESSION NR: AP5017714

AUTHOR: Iatan, M. (Engineer); Goga, L. (Engineer)

TITLE: Considerations on certain quartzites found in the Rumanian People's Republic used in the manufacture of iron-silicon

SOURCE: Metalurgia, no. 10, 1964, 429-433

TOPIC TAGS: quartz, iron, silicon

ABSTRACT: A description of the quartzites from Hobita, Dealul Cernol and Platru Ricioasa. The chemical composition of the different types is given, as are the principal physical properties including macroscopic and microscopic structure, density, water sorption capacity, softening point and behavior when heated to 1,500 degrees centigrade. Orig. art. has 4 figures, 10 graphs, and 7 tables.

ASSOCIATION: Institutul de cercetari metalurgice (Metallurgical Research Institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: MF, RM

NO REF SOV: 000

OTHER: 000

JFIS

Card 1/1

GOGA, M., ing.

Aspects of the designing of woven fur imitations. Ind text  
Rum 16 no.1:29-31 Ja '65.

1. "Tenatoriile Reunite" Weaving Factory, Bucharest.

ZUBOVICH, V.K.; GOGA, P.I.

Cervical pregnancy. Zdrav. Bel. 7 no.6:57-58 Ja '61. (PIRA 15:2)

1. Iz Luzhskoy sel'skoy uchastkovoy bol'nitsy Vitebskoy oblasti  
(glavnyy vrach V.K.Zubovich).  
(PREGNANCY, EXTRAUTERINE)

ILIESCU, C.C., prof.; KLEINERMAN, L., conf. ; GOGA, S., dr.

Reserpine in the treatment of several arrhythmias. Med. int.,  
Bucur. 12 no.1:49-54 Ja '60.

1. Lucrare efectuata in Clinica medicala a Spitalului "Bernat  
Andrei", Bucuresti.  
    (ARRHYTHMIA, therapy)  
    (RESERPINE, therapy)

ROMANIA

DRAGANESCU, C. I., MD; COGA-IONESCU, Silvia, MD; CSAP, C. F., MD;  
COPORNI, Rodica, MD.

Institute for Oncology, Bucharest (Institutul Oncologic,  
Bucuresti) - (for all); Director: Lecturer O. Costachel.

Bucharest, Medicina Interna, No 12, Dec 63, pp 1435-1438

"Results Obtained in two Cases of Severe Leukothrombopenia,  
/ with Haemorrhagi-parous Syndrome Occurring after Administration  
of Cytostatics, treated with Homologous Haematopoietic Tissue."

(4)

STANIEWSKI, Ryszard; KOWALSKI, Mieczyslaw; GOGACZ, Edward; SOKOLOWSKA, Franciszka

Susceptibility of Rhizobium strains to phages. Acta microbiol. polon.  
11 no.3:245-254 '62.

1. From the Department of General Microbiology, Maria Curie-  
Skłodowska University, Lublin.  
(RHIZOBIUM) (BACTERIOPHAGE)



GOGASZ, Nowalany; GOGACZ, Jan

Effect of isonicotinic acid hydrazide on permeability of tissues and blood vessels. Gruslica 23 no.2:81-87 Feb '55.

1. Z Kliniki Gruźlicy A.m. we Wrocławiu. Kierownik: docent dr.med. T. Garbiński, i z Sanatorium Pręciwgrusliczego P.K.P. w Szklarskiej Porębie Dolnej Dyrektor: dr m. Mostowski. (W pracach laboratoryjnych brała udział asyst.tech. B.Urbaniowicz) Szklarska Poręba Dolna, Sanatorium PKP.

(NICOTINIC ACID ISOMERS, effects

isoniazid on blood vessel & tissue permeability)

(OSMOSIS AND PERMEABILITY

permeability of blood vessels & tissues, eff. of isoniazid)

(BLOOD VESSELS, physiology

permeability, eff. of isoniazid)

POLAND/General Problems of Pathology - Pathophysiology of the  
Infectious Process.

U

Abs Jour : Ref Zhur Biol., No 6, 1959, 27269

Author : Garbinski, Tadeusz; Gogacz, Jan

Inst : -

Title : On the Possibility of Utilization of Experimental  
Tuberculosis of the Eye in Rabbit for Investigation of  
the Process Dynamics in Tuberculous Focus

Orig Pub : Gruzlica, 1957, 25, No 3, 189-194

Abstract : After introduction to rabbits into the camera oculi ante-  
rior of 40-80 ml of mycobacterium tuberculosis (MT) of  
human type, 3 types of tuberculous process were discove-  
red which depended on the individual characteristics of  
the animal without relation to the amount of introduced  
MT. The I type is characterized by a limited violent  
inflammatory reaction of conjunctiva and partially of  
iris with fast reverse development and scar formation.

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S/056/63/044/002/023/065  
B102/B186

AUTHORS: Kulik, I. O., Cogadze, G. A.

TITLE: Quantum oscillations in the tunnel contact current of two metals in a magnetic field

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 2, 1963, 530-535

TEXT: The authors consider two different metals which are separated by a thin semiconductor layer to which a constant or alternating magnetic field is applied perpendicularly. The tunnel contact current oscillations arising in both cases are calculated (cf. also: Phys. Rev. Lett. 5, 55, 1960; J. Phys. Chem. Sol. 19, 8, 1961; Phys. Rev. 123, 85, 1961). It is shown that these oscillations allow the determination of the extreme cross-sections of the Fermi surface and of the effective masses of the quasi-particles. For the small electron groups the amplitude of the oscillations is sufficiently great; for the large groups it is very small since the probability of tunnelling through the potential barrier is extremely small for the electrons at the extremum sections responsible for the

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S/056/63/04/002/023/065  
B102/B186

Quantum oscillations in the ...

oscillation phenomena. Another type of oscillation caused by oscillations of the chemical potentials of the metals can be observed in alternating magnetic fields in which the pulse duration  $T$  is smaller than the relaxation time  $\tau$  of the tunnel diode. The amplitude of the oscillation of the chemical potential  $\xi$  can be estimated from the relation

$$\xi^{\text{osc}} \sim \frac{\pi}{\sqrt{2}} \theta \left( \frac{\mu H}{kT} \right)^{1/2} \exp(-2\pi^2 \theta / \mu H). \text{ With } \theta = 10^0 \text{ K and } H = 10^4 \text{ oe for}$$

the small electron groups,  $\xi^{\text{osc}} \sim 10^{-3} - 10^{-4}$  ev; for the large groups it is  $\sim 10^{-6}$  ev.  $\tau$  is estimated from  $\tau = RC$  ( $R$  and  $C$  of the contact); for  $v_F \sim 10^8$  cm/sec,  $n \sim 10^{22}$  cm $^{-3}$ , and  $S \sim 1$  cm $^2$  one obtains  $\tau \sim 10^{-3}$  sec.

$T \leq RC$  is easily achieved by raising the gap width. The experimental possibilities are such that the  $\xi$ -oscillations can be observed even at relatively high temperatures. There are 2 figures.

ASSOCIATION: Fiziko-tehnicheskii institut nizkikh temperatur Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of Low Temperatures of the Academy of Sciences Ukrainskaya SSR)

SUBMITTED:  
Card 2/2

June 17, 1962

ACCESSION NR: AP4025924

S/0056/64/046/003/0913/0919

AUTHOR: Gogadze, G. A.; Itskovich, F. I.; Kulik, I. O.

TITLE: Quantum oscillations of cold-emission current of metals in a magnetic field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 46, no. 3, 1964, 913-919

TOPIC TAGS: cold emission, field emission, tunnel current, tunnel current oscillation, chemical potential, number of electronic states, complex cathode emission

ABSTRACT: Following an earlier study of the oscillations of the tunnel current between two metals separated by a thin layer of dielectric, which yielded a more accurate determination of the effective mass and which showed that the tunnel-current oscillations depend significantly on the oscillations of the chemical potential of the metals, the authors investigate theoretically the oscillations of the field-emission current from a metal in a magnetic field perpendicular to the sample surface. The oscillations are shown to be due either to oscillations

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ACCESSION NR: AP4025924

in the number of the electronic states in the magnetic field or to oscillations of the chemical potential of the metal, the latter having usually an appreciable amplitude and the former being significant only for metals having small electron groups. As an example, the features are considered of field emission from a complex cathode consisting of two metals separated by a thin layer of dielectric, through which tunnel current can flow. It is shown that a considerable current can exist even in a relatively weak field incapable of inducing appreciable emission from one of the metals (in the absence of a potential difference between metals). The field-emission current exhibits oscillations associated with both metals. It is pointed out that an experimental investigation of these oscillations is extremely difficult. Orig. art. has: 4 figures and 16 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR (Physicotechnical Institute of Low Temperatures, AN UkrSSR); Khar'kovskoye vysshaye komandno-inzhenernoye uchilishche (Khar'kov Engineer Officers' College).

SUBMITTED: 27Jul63

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: PH, GE

NR REF SOV: 009

OTHER: 001

Card 2/2

L 38541-65 EWT(1)/EWT(2)/EWP(b)/T/EWP(t) 81-2 IJP(c) GG/11

ACCESSION NR: AP5005278

S/0181/65/001/002/0112/0110

AUTHOR: Gogadze, G. A.; Kulik, I. O.

TITLE: Oscillations of the tunnel current from thin metallic layers

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 432-440

TOPIC TAGS: thin film, tunnel effect, quantum effect, potential barrier, superconductivity, particle collision

ABSTRACT: As a supplementary means of studying the energy spectra, the authors investigate theoretically quantum effects arising when electrons tunnel through a potential barrier. These effects are connected with the finite thickness of the metal films constituting the tunnel junction, and are considered for the case when one of the metals (or both) is sufficiently thin ( $10^{-7}$  cm in most metals, but as thick as  $10^{-5}$  in the case of bismuth and some other metals). The tunnel current oscillates as a function of the applied bias, and the effective mass of the quasi-particles can be determined from the oscillation period. The authors are interested not in the absolute value of the current, but in its variation upon quantization of the spectrum (for example, on going from the region of high temperatures

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ACCESSION NR: AP5005278

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to low ones). If the tunnel junction is made up of a normal metal film and a superconductor, oscillations of a new type arise, without the usual temperature dependence. Using the approach developed by R. B. Dingle (Proc. Roy. Soc. U. A211, 500 and 517, 1952) the authors investigate also the influence of volume and surface collisions on the amplitude of the current oscillations, and show in particular that the amplitude of the  $n$ -th oscillating harmonic decreases by a factor  $p^{2n}$  ( $p$  -- coefficient of specularity in the reflection of the electron from the film boundary). It is noted that unlike volume collisions, where the oscillation amplitude depends on the reciprocal scattering time exponentially, the variation is slower and not exponential in the case of surface collisions. For example, at a specularity coefficient  $p = 0.3$  the amplitude of the first oscillating harmonic will decrease only by a factor of approximately 10. "We thank V. L. Bonch-Bruyevich for reading the paper and useful remarks." Orig. aut. has: 31 formulas and 3 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur AN URSR, Kharkov  
(Physicotechnical Institute of Low Temperatures, AN URSR)

SUBMITTED: 18Jul64

ENCL: 00

SUB CODE: 83,60

NR REF SOV: 004

OTHER: 007

Card 2/2 *mb*



DRAGANESCU, C.I., dr.; GOGA-IONESCU, Silvia, dr.; CSAP, C.F., dr.  
COPORAN, Rodica, dr.

Results obtained in two cases of severe leukothrombopenia with a hemorrhagic syndrome, appearing after administration of cytostatics, treated with homologous hematopoietic tissue. Med. intern. 15 no.12:1435-1438 D'63.

1. Lucrare efectuata in Institutul oncologic, Bucuresti (director: conf. O.Costachel).

(C. G. H. H., H.)

AUTHOR: Gogala, A., Engineer

307-127-13-3, 7/14

TITLE: Methods of Exploitation of Metal Ores in Yugoslavia (Sistemy razrabotki na metallicheskih rudnikakh Yugoslaviya)

PERIODICAL: Gornyy zhurnal, 1959, Nr 3, pp 35-39 (JGSR)

ABSTRACT: The author sums up information received on the exploitation of various ore deposits in Yugoslavia. In 1956, 60% of copper ore and 70% of bauxite were extracted by open-pit mining. In the lead-zinc mine "Mezhitse", both the overhand stoping and open-pit methods are used. In the Bor copper mine the sub-level caving method is used. The polymetal mines "Trepcha" and "Rudnik", as well as the lead-zinc mine "Zlatovo" are exploited by overhand stoping method. Some details of labor productivity are given. The article was translated from Serbo-Croatian by Engineer Ya. A. Feldman. There are 4 figures.

1. Mining industry--Yugoslavia
2. Ores--Production

Card 1/1

*Proyektiny institut metalurgii, Beograd, SSSR, Narodnaya  
Respublika Yugoslaviya*

GOGALA, A.

"Planning, designing and rationalization of coal mines" by Alois Riman. Reviewed by A. Gogala. Rud mot zbor no.2:162 '62.

PAVKO, D.; OCEPEK, Drago, dr. inz., dozent; TRAFENAUER, S.;  
SICHERL, B.; KERSNIC ML., V.; PAULIN, A.; GORUP, M.;  
CAZAFURA, K.; VIDERGAR, F.; ANLIN, F.; KAVCIC, J.;  
KERSNIC, Viktor, prof. dr. inz.; GOGALA, A.; RAMOVS, A.;  
SKUBIC, T.

New books. Rud met zbor no. 2:189-216 '64.

1. Chief Editor, "Rudarsko-metalurski zbornik" (for Kersnic,  
Viktor).

GOGALA, L.

"News of Aviation", P. 6, (REPULES, Vol. 7, No. 13, July 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

GOGALA, Matjaz; MICHIELI, Stefan

Seasonal change of colors in some species of Heteroptera.  
Biol vest no.10:33-44 '62.

1. Bioloski institut Univerze v Ljubljani. 2. Urednik,  
"Bioloski vestnik" (for Michieli).

GOGALA, M.; NICHIELI, S.

Color of Heteroptera. Bul sc Youg 7 no.3:61-62 Jo '62.

1. Bioloski institut Univerze, Ljubljana.

GOGALA, Matjaz; POTHIER, Stefan

Monogenic and diphasic retinograms in insects. Biol inst 15:13-20  
'64.

L. Biologic Institute of the University of Ljubljana, Ljubljana.  
Submitted July 31, 1964.



GOGALADZE, A.S. (L'vov)

Cysticercosis in the radiogram. Vest.rent.f rad. 34 no.5:80-82 S-0  
'59. (MIRA 13:3)  
(CYSTICERCOSIS radiography)

GOGALADZE, A.S.; RASPOPOV, M.M.; MOIN, S.R.

Lateroscope. Vest. rent. 1 rad. 36 no. 1:60 Ja-F '61. (MIRA 14:4)  
(X RAYS—APPARATUS AND SUPPLIES)

GOGALADZE, A.S.

Dosimetric apparatus for filling the large intestine with a contrast medium. Vest. rent. 1 rad. 36 no. 2:61-63 Mr-Ap '61. (MIRA 14:4)  
(RADIOLOGY, MEDICAL—EQUIPMENT AND SUPPLIES)

GOGALADZE, A.S.; KUZNETSOV, I.L.

Closed lesion of the lung. Vest. ~~roat~~. 1 rad. 28 no.2:63-64  
Mr-Ap'63. (MIRA 16:9)  
(LUNGS--WOUNDS AND INJURIES)